Release notes for ENDF/B Development n-060_Nd_150 evaluation

April 26, 2017

- `checkr`   Warnings:

  1. A previous error halted parsing of the current section
     MAT=6049, MF= 1, MT=451 (1): Parsing stopped

     ```
     ERROR(S) FOUND IN MAT=6049, MF= 1, MT=451
         SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER     245 TO     389
     ```

- `checkr`   Errors:

  1. A variable is outside the allowed ENDF range
     MAT=6049, MF= 1, MT=451 (0): Variable range

     ```
     ERROR(S) FOUND IN MAT=6049, MF= 1, MT=451
         MOD =    1 OUT OF RANGE    0 -    0         RECORD NUMBER    245
     ```

  2. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF= 2, MT=151 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=6049, MF= 2, MT=151
         SECTION  2/151 NOT IN DIRECTORY            RECORD NUMBER    391
     ```

  3. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF= 3, MT= 1 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=6049, MF= 3, MT=  1
         SECTION  3/  1 NOT IN DIRECTORY            RECORD NUMBER    587
     ```

  4. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF= 3, MT= 2 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=6049, MF= 3, MT=  2
         SECTION  3/  2 NOT IN DIRECTORY            RECORD NUMBER    604
     ```

  5. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF= 3, MT= 4 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=6049, MF= 3, MT=  4
         SECTION  3/  4 NOT IN DIRECTORY            RECORD NUMBER    630
     ```

  6. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF= 3, MT= 16 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=6049, MF= 3, MT= 16
         SECTION  3/ 16 NOT IN DIRECTORY            RECORD NUMBER    653
     ```

  7. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF= 3, MT= 17 (0): Directory (b)

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```
ERROR(S) FOUND IN MAT=6049, MF= 3, MT= 17
    SECTION  3/ 17 NOT IN DIRECTORY                RECORD NUMBER     663
```

8. Missing a section in directory so your directory is messed up. This error will break everything else
   MAT=6049, MF= 3, MT= 22 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6049, MF= 3, MT= 22
    SECTION  3/ 22 NOT IN DIRECTORY                RECORD NUMBER     670
```

9. Missing a section in directory so your directory is messed up. This error will break everything else
   MAT=6049, MF= 3, MT= 24 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6049, MF= 3, MT= 24
    SECTION  3/ 24 NOT IN DIRECTORY                RECORD NUMBER     681
```

10. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 3, MT= 28 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6049, MF= 3, MT= 28
    SECTION  3/ 28 NOT IN DIRECTORY                RECORD NUMBER     689
```

11. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 3, MT= 41 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6049, MF= 3, MT= 41
    SECTION  3/ 41 NOT IN DIRECTORY                RECORD NUMBER     697
```

12. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 3, MT= 51 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6049, MF= 3, MT= 51
    SECTION  3/ 51 NOT IN DIRECTORY                RECORD NUMBER     703
```

13. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 3, MT= 52 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6049, MF= 3, MT= 52
    SECTION  3/ 52 NOT IN DIRECTORY                RECORD NUMBER     722
```

14. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 3, MT= 53 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6049, MF= 3, MT= 53
    SECTION  3/ 53 NOT IN DIRECTORY                RECORD NUMBER     739
```

15. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 3, MT= 54 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 3, MT= 54
            SECTION  3/ 54 NOT IN DIRECTORY                 RECORD NUMBER     755
```

16. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 3, MT= 55 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 3, MT= 55
            SECTION  3/ 55 NOT IN DIRECTORY                 RECORD NUMBER     771
```

17. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 3, MT= 56 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 3, MT= 56
            SECTION  3/ 56 NOT IN DIRECTORY                 RECORD NUMBER     786
```

18. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 3, MT= 57 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 3, MT= 57
            SECTION  3/ 57 NOT IN DIRECTORY                 RECORD NUMBER     801
```

19. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 3, MT= 91 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 3, MT= 91
            SECTION  3/ 91 NOT IN DIRECTORY                 RECORD NUMBER     816
```

20. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 3, MT=102 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 3, MT=102
            SECTION  3/102 NOT IN DIRECTORY                 RECORD NUMBER     832
```

21. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 3, MT=103 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 3, MT=103
            SECTION  3/103 NOT IN DIRECTORY                 RECORD NUMBER     852
```

22. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 3, MT=107 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 3, MT=107
            SECTION  3/107 NOT IN DIRECTORY                 RECORD NUMBER     864
```

23. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 3, MT=600 (0): Directory (b)

```
          ERROR(S) FOUND IN MAT=6049, MF= 3, MT=600
             SECTION  3/600 NOT IN DIRECTORY                    RECORD NUMBER     877
```

24. Missing a section in directory so your directory is messed up. This error will break everything else
    $MAT=6049$, $MF= 3$, $MT=601$ (0): Directory (b)

```
          ERROR(S) FOUND IN MAT=6049, MF= 3, MT=601
             SECTION  3/601 NOT IN DIRECTORY                    RECORD NUMBER     888
```

25. Missing a section in directory so your directory is messed up. This error will break everything else
    $MAT=6049$, $MF= 3$, $MT=649$ (0): Directory (b)

```
          ERROR(S) FOUND IN MAT=6049, MF= 3, MT=649
             SECTION  3/649 NOT IN DIRECTORY                    RECORD NUMBER     899
```

26. Missing a section in directory so your directory is messed up. This error will break everything else
    $MAT=6049$, $MF= 3$, $MT=800$ (0): Directory (b)

```
          ERROR(S) FOUND IN MAT=6049, MF= 3, MT=800
             SECTION  3/800 NOT IN DIRECTORY                    RECORD NUMBER     910
```

27. Missing a section in directory so your directory is messed up. This error will break everything else
    $MAT=6049$, $MF= 3$, $MT=801$ (0): Directory (b)

```
          ERROR(S) FOUND IN MAT=6049, MF= 3, MT=801
             SECTION  3/801 NOT IN DIRECTORY                    RECORD NUMBER     923
```

28. Missing a section in directory so your directory is messed up. This error will break everything else
    $MAT=6049$, $MF= 3$, $MT=802$ (0): Directory (b)

```
          ERROR(S) FOUND IN MAT=6049, MF= 3, MT=802
             SECTION  3/802 NOT IN DIRECTORY                    RECORD NUMBER     936
```

29. Missing a section in directory so your directory is messed up. This error will break everything else
    $MAT=6049$, $MF= 3$, $MT=803$ (0): Directory (b)

```
          ERROR(S) FOUND IN MAT=6049, MF= 3, MT=803
             SECTION  3/803 NOT IN DIRECTORY                    RECORD NUMBER     949
```

30. Missing a section in directory so your directory is messed up. This error will break everything else
    $MAT=6049$, $MF= 3$, $MT=804$ (0): Directory (b)

```
          ERROR(S) FOUND IN MAT=6049, MF= 3, MT=804
             SECTION  3/804 NOT IN DIRECTORY                    RECORD NUMBER     962
```

31. Missing a section in directory so your directory is messed up. This error will break everything else
    $MAT=6049$, $MF= 3$, $MT=805$ (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 3, MT=805
          SECTION  3/805 NOT IN DIRECTORY                RECORD NUMBER     975
```

32. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 3, MT=806 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 3, MT=806
          SECTION  3/806 NOT IN DIRECTORY                RECORD NUMBER     988
```

33. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 3, MT=807 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 3, MT=807
          SECTION  3/807 NOT IN DIRECTORY                RECORD NUMBER    1001
```

34. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 3, MT=808 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 3, MT=808
          SECTION  3/808 NOT IN DIRECTORY                RECORD NUMBER    1014
```

35. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 3, MT=809 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 3, MT=809
          SECTION  3/809 NOT IN DIRECTORY                RECORD NUMBER    1027
```

36. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 3, MT=810 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 3, MT=810
          SECTION  3/810 NOT IN DIRECTORY                RECORD NUMBER    1040
```

37. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 3, MT=811 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 3, MT=811
          SECTION  3/811 NOT IN DIRECTORY                RECORD NUMBER    1053
```

38. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 3, MT=812 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 3, MT=812
          SECTION  3/812 NOT IN DIRECTORY                RECORD NUMBER    1066
```

39. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 3, MT=813 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6049, MF= 3, MT=813
    SECTION  3/813 NOT IN DIRECTORY              RECORD NUMBER    1079
```

40. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 3, MT=814 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6049, MF= 3, MT=814
    SECTION  3/814 NOT IN DIRECTORY              RECORD NUMBER    1092
```

41. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 3, MT=815 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6049, MF= 3, MT=815
    SECTION  3/815 NOT IN DIRECTORY              RECORD NUMBER    1105
```

42. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 3, MT=816 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6049, MF= 3, MT=816
    SECTION  3/816 NOT IN DIRECTORY              RECORD NUMBER    1118
```

43. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 3, MT=817 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6049, MF= 3, MT=817
    SECTION  3/817 NOT IN DIRECTORY              RECORD NUMBER    1131
```

44. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 3, MT=818 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6049, MF= 3, MT=818
    SECTION  3/818 NOT IN DIRECTORY              RECORD NUMBER    1144
```

45. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 3, MT=819 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6049, MF= 3, MT=819
    SECTION  3/819 NOT IN DIRECTORY              RECORD NUMBER    1157
```

46. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 3, MT=820 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6049, MF= 3, MT=820
    SECTION  3/820 NOT IN DIRECTORY              RECORD NUMBER    1170
```

47. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 3, MT=849 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 3, MT=849
          SECTION  3/849 NOT IN DIRECTORY                    RECORD NUMBER    1183
```

48. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT= 2 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT=  2
          SECTION  4/  2 NOT IN DIRECTORY                    RECORD NUMBER    1197
```

49. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT= 51 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT= 51
          SECTION  4/ 51 NOT IN DIRECTORY                    RECORD NUMBER    1350
```

50. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT= 52 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT= 52
          SECTION  4/ 52 NOT IN DIRECTORY                    RECORD NUMBER    1487
```

51. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT= 53 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT= 53
          SECTION  4/ 53 NOT IN DIRECTORY                    RECORD NUMBER    1606
```

52. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT= 54 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT= 54
          SECTION  4/ 54 NOT IN DIRECTORY                    RECORD NUMBER    1724
```

53. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT= 55 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT= 55
          SECTION  4/ 55 NOT IN DIRECTORY                    RECORD NUMBER    1829
```

54. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT= 56 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT= 56
          SECTION  4/ 56 NOT IN DIRECTORY                    RECORD NUMBER    1940
```

55. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT= 57 (0): Directory (b)

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```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT= 57
          SECTION  4/ 57 NOT IN DIRECTORY                 RECORD NUMBER    2058
```

56. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT=600 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT=600
          SECTION  4/600 NOT IN DIRECTORY                 RECORD NUMBER    2168
```

57. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT=601 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT=601
          SECTION  4/601 NOT IN DIRECTORY                 RECORD NUMBER    2211
```

58. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT=800 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT=800
          SECTION  4/800 NOT IN DIRECTORY                 RECORD NUMBER    2254
```

59. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT=801 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT=801
          SECTION  4/801 NOT IN DIRECTORY                 RECORD NUMBER    2311
```

60. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT=802 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT=802
          SECTION  4/802 NOT IN DIRECTORY                 RECORD NUMBER    2368
```

61. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT=803 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT=803
          SECTION  4/803 NOT IN DIRECTORY                 RECORD NUMBER    2425
```

62. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT=804 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT=804
          SECTION  4/804 NOT IN DIRECTORY                 RECORD NUMBER    2482
```

63. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT=805 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT=805
            SECTION  4/805 NOT IN DIRECTORY                   RECORD NUMBER    2539
```

64. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT=806 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT=806
            SECTION  4/806 NOT IN DIRECTORY                   RECORD NUMBER    2596
```

65. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT=807 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT=807
            SECTION  4/807 NOT IN DIRECTORY                   RECORD NUMBER    2653
```

66. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT=808 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT=808
            SECTION  4/808 NOT IN DIRECTORY                   RECORD NUMBER    2710
```

67. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT=809 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT=809
            SECTION  4/809 NOT IN DIRECTORY                   RECORD NUMBER    2767
```

68. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT=810 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT=810
            SECTION  4/810 NOT IN DIRECTORY                   RECORD NUMBER    2824
```

69. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT=811 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT=811
            SECTION  4/811 NOT IN DIRECTORY                   RECORD NUMBER    2881
```

70. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT=812 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT=812
            SECTION  4/812 NOT IN DIRECTORY                   RECORD NUMBER    2938
```

71. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT=813 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT=813
          SECTION  4/813 NOT IN DIRECTORY                RECORD NUMBER   2995
```

72. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT=814 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT=814
          SECTION  4/814 NOT IN DIRECTORY                RECORD NUMBER   3052
```

73. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT=815 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT=815
          SECTION  4/815 NOT IN DIRECTORY                RECORD NUMBER   3109
```

74. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT=816 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT=816
          SECTION  4/816 NOT IN DIRECTORY                RECORD NUMBER   3166
```

75. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT=817 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT=817
          SECTION  4/817 NOT IN DIRECTORY                RECORD NUMBER   3223
```

76. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT=818 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT=818
          SECTION  4/818 NOT IN DIRECTORY                RECORD NUMBER   3280
```

77. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT=819 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT=819
          SECTION  4/819 NOT IN DIRECTORY                RECORD NUMBER   3337
```

78. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 4, MT=820 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF= 4, MT=820
          SECTION  4/820 NOT IN DIRECTORY                RECORD NUMBER   3394
```

79. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 6, MT= 16 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6049, MF= 6, MT= 16
     SECTION  6/ 16 NOT IN DIRECTORY                RECORD NUMBER    3452
```

80. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 6, MT= 17 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6049, MF= 6, MT= 17
     SECTION  6/ 17 NOT IN DIRECTORY                RECORD NUMBER    4973
```

81. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 6, MT= 22 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6049, MF= 6, MT= 22
     SECTION  6/ 22 NOT IN DIRECTORY                RECORD NUMBER    5412
```

82. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 6, MT= 24 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6049, MF= 6, MT= 24
     SECTION  6/ 24 NOT IN DIRECTORY                RECORD NUMBER    7832
```

83. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 6, MT= 28 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6049, MF= 6, MT= 28
     SECTION  6/ 28 NOT IN DIRECTORY                RECORD NUMBER    8401
```

84. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 6, MT= 41 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6049, MF= 6, MT= 41
     SECTION  6/ 41 NOT IN DIRECTORY                RECORD NUMBER    9147
```

85. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 6, MT= 91 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6049, MF= 6, MT= 91
     SECTION  6/ 91 NOT IN DIRECTORY                RECORD NUMBER    9246
```

86. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 6, MT=102 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6049, MF= 6, MT=102
     SECTION  6/102 NOT IN DIRECTORY                RECORD NUMBER   14657
```

87. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 6, MT=649 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6049, MF= 6, MT=649
         SECTION  6/649 NOT IN DIRECTORY                RECORD NUMBER   16301
```

88. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF= 6, MT=849 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6049, MF= 6, MT=849
         SECTION  6/849 NOT IN DIRECTORY                RECORD NUMBER   17201
```

89. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF=12, MT= 51 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6049, MF=12, MT= 51
         SECTION 12/ 51 NOT IN DIRECTORY                RECORD NUMBER   18426
```

90. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF=12, MT= 52 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6049, MF=12, MT= 52
         SECTION 12/ 52 NOT IN DIRECTORY                RECORD NUMBER   18430
```

91. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF=12, MT= 53 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6049, MF=12, MT= 53
         SECTION 12/ 53 NOT IN DIRECTORY                RECORD NUMBER   18434
```

92. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF=12, MT= 54 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6049, MF=12, MT= 54
         SECTION 12/ 54 NOT IN DIRECTORY                RECORD NUMBER   18438
```

93. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF=12, MT= 55 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6049, MF=12, MT= 55
         SECTION 12/ 55 NOT IN DIRECTORY                RECORD NUMBER   18442
```

94. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF=12, MT= 56 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6049, MF=12, MT= 56
         SECTION 12/ 56 NOT IN DIRECTORY                RECORD NUMBER   18447
```

95. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF=12, MT= 57 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF=12, MT= 57
          SECTION 12/ 57 NOT IN DIRECTORY                RECORD NUMBER   18451
```

96. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF=12, MT=601 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF=12, MT=601
          SECTION 12/601 NOT IN DIRECTORY                RECORD NUMBER   18455
```

97. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF=12, MT=801 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF=12, MT=801
          SECTION 12/801 NOT IN DIRECTORY                RECORD NUMBER   18459
```

98. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF=12, MT=802 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF=12, MT=802
          SECTION 12/802 NOT IN DIRECTORY                RECORD NUMBER   18463
```

99. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6049, MF=12, MT=803 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF=12, MT=803
          SECTION 12/803 NOT IN DIRECTORY                RECORD NUMBER   18467
```

100. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=12, MT=804 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF=12, MT=804
          SECTION 12/804 NOT IN DIRECTORY                RECORD NUMBER   18471
```

101. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=12, MT=805 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF=12, MT=805
          SECTION 12/805 NOT IN DIRECTORY                RECORD NUMBER   18475
```

102. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=12, MT=806 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF=12, MT=806
          SECTION 12/806 NOT IN DIRECTORY                RECORD NUMBER   18479
```

103. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=12, MT=807 (0): Directory (b)

13

```
        ERROR(S) FOUND IN MAT=6049, MF=12, MT=807
            SECTION 12/807 NOT IN DIRECTORY                    RECORD NUMBER    18483
```

104. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=12, MT=808 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF=12, MT=808
            SECTION 12/808 NOT IN DIRECTORY                    RECORD NUMBER    18487
```

105. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=12, MT=809 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF=12, MT=809
            SECTION 12/809 NOT IN DIRECTORY                    RECORD NUMBER    18491
```

106. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=12, MT=810 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF=12, MT=810
            SECTION 12/810 NOT IN DIRECTORY                    RECORD NUMBER    18495
```

107. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=12, MT=811 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF=12, MT=811
            SECTION 12/811 NOT IN DIRECTORY                    RECORD NUMBER    18499
```

108. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=12, MT=812 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF=12, MT=812
            SECTION 12/812 NOT IN DIRECTORY                    RECORD NUMBER    18504
```

109. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=12, MT=813 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF=12, MT=813
            SECTION 12/813 NOT IN DIRECTORY                    RECORD NUMBER    18509
```

110. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=12, MT=814 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF=12, MT=814
            SECTION 12/814 NOT IN DIRECTORY                    RECORD NUMBER    18513
```

111. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=12, MT=815 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=6049, MF=12, MT=815
         SECTION 12/815 NOT IN DIRECTORY                    RECORD NUMBER    18517
```

112. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=12, MT=816 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=6049, MF=12, MT=816
         SECTION 12/816 NOT IN DIRECTORY                    RECORD NUMBER    18521
```

113. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=12, MT=817 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=6049, MF=12, MT=817
         SECTION 12/817 NOT IN DIRECTORY                    RECORD NUMBER    18525
```

114. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=12, MT=818 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=6049, MF=12, MT=818
         SECTION 12/818 NOT IN DIRECTORY                    RECORD NUMBER    18529
```

115. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=12, MT=819 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=6049, MF=12, MT=819
         SECTION 12/819 NOT IN DIRECTORY                    RECORD NUMBER    18533
```

116. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=12, MT=820 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=6049, MF=12, MT=820
         SECTION 12/820 NOT IN DIRECTORY                    RECORD NUMBER    18537
```

117. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=14, MT= 51 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=6049, MF=14, MT= 51
         SECTION 14/ 51 NOT IN DIRECTORY                    RECORD NUMBER    18542
```

118. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=14, MT= 52 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=6049, MF=14, MT= 52
         SECTION 14/ 52 NOT IN DIRECTORY                    RECORD NUMBER    18544
```

119. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=14, MT= 53 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6049, MF=14, MT= 53
         SECTION 14/ 53 NOT IN DIRECTORY                RECORD NUMBER   18546
```

120. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6049, MF=14, MT= 54 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6049, MF=14, MT= 54
         SECTION 14/ 54 NOT IN DIRECTORY                RECORD NUMBER   18548
```

121. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6049, MF=14, MT= 55 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6049, MF=14, MT= 55
         SECTION 14/ 55 NOT IN DIRECTORY                RECORD NUMBER   18550
```

122. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6049, MF=14, MT= 56 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6049, MF=14, MT= 56
         SECTION 14/ 56 NOT IN DIRECTORY                RECORD NUMBER   18552
```

123. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6049, MF=14, MT= 57 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6049, MF=14, MT= 57
         SECTION 14/ 57 NOT IN DIRECTORY                RECORD NUMBER   18554
```

124. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6049, MF=14, MT=601 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6049, MF=14, MT=601
         SECTION 14/601 NOT IN DIRECTORY                RECORD NUMBER   18556
```

125. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6049, MF=14, MT=801 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6049, MF=14, MT=801
         SECTION 14/801 NOT IN DIRECTORY                RECORD NUMBER   18558
```

126. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6049, MF=14, MT=802 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6049, MF=14, MT=802
         SECTION 14/802 NOT IN DIRECTORY                RECORD NUMBER   18560
```

127. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6049, MF=14, MT=803 (0): Directory (b)

16

```
      ERROR(S) FOUND IN MAT=6049, MF=14, MT=803
          SECTION 14/803 NOT IN DIRECTORY                    RECORD NUMBER    18562
```

128. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=14, MT=804 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6049, MF=14, MT=804
          SECTION 14/804 NOT IN DIRECTORY                    RECORD NUMBER    18564
```

129. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=14, MT=805 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6049, MF=14, MT=805
          SECTION 14/805 NOT IN DIRECTORY                    RECORD NUMBER    18566
```

130. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=14, MT=806 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6049, MF=14, MT=806
          SECTION 14/806 NOT IN DIRECTORY                    RECORD NUMBER    18568
```

131. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=14, MT=807 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6049, MF=14, MT=807
          SECTION 14/807 NOT IN DIRECTORY                    RECORD NUMBER    18570
```

132. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=14, MT=808 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6049, MF=14, MT=808
          SECTION 14/808 NOT IN DIRECTORY                    RECORD NUMBER    18572
```

133. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=14, MT=809 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6049, MF=14, MT=809
          SECTION 14/809 NOT IN DIRECTORY                    RECORD NUMBER    18574
```

134. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=14, MT=810 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6049, MF=14, MT=810
          SECTION 14/810 NOT IN DIRECTORY                    RECORD NUMBER    18576
```

135. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=14, MT=811 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF=14, MT=811
          SECTION 14/811 NOT IN DIRECTORY                RECORD NUMBER   18578
```

136. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=14, MT=812 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF=14, MT=812
          SECTION 14/812 NOT IN DIRECTORY                RECORD NUMBER   18580
```

137. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=14, MT=813 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF=14, MT=813
          SECTION 14/813 NOT IN DIRECTORY                RECORD NUMBER   18582
```

138. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=14, MT=814 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF=14, MT=814
          SECTION 14/814 NOT IN DIRECTORY                RECORD NUMBER   18584
```

139. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=14, MT=815 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF=14, MT=815
          SECTION 14/815 NOT IN DIRECTORY                RECORD NUMBER   18586
```

140. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=14, MT=816 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF=14, MT=816
          SECTION 14/816 NOT IN DIRECTORY                RECORD NUMBER   18588
```

141. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=14, MT=817 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF=14, MT=817
          SECTION 14/817 NOT IN DIRECTORY                RECORD NUMBER   18590
```

142. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=14, MT=818 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6049, MF=14, MT=818
          SECTION 14/818 NOT IN DIRECTORY                RECORD NUMBER   18592
```

143. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6049, MF=14, MT=819 (0): Directory (b)

18

```
          ERROR(S) FOUND IN MAT=6049, MF=14, MT=819
             SECTION 14/819 NOT IN DIRECTORY                RECORD NUMBER   18594
```

144. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6049, MF=14, MT=820 (0): Directory (b)

```
          ERROR(S) FOUND IN MAT=6049, MF=14, MT=820
             SECTION 14/820 NOT IN DIRECTORY                RECORD NUMBER   18596
```

- **psyche** Warnings:

1. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 150. L = 1 / STRENGTH FUNCTION IS 1.50772E-05 / AVERAGE GAMMA WIDTH 3.60000E-02 / LIES OUTSIDE LIMITS 4.00000E-02 TO 9.00000E+00 EV. (0): URR str. ftn.

```
FILE  2
   SECTION 151
      ISOTOPE MASS = 150. L =  1
                  STRENGTH FUNCTION IS  1.50772E-05
                              AVERAGE GAMMA WIDTH 3.60000E-02
... [1 more lines]
```

2. Level density in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 1.38500E+04. STRENGTH FUNCTION IS 1.20000E-04 / ENERGY = 1.38500E+04. STRENGTH FUNCTION IS 1.20000E-04 / DENSITY 8.98113E+01 SHOULD BE 8.22506E+01 (0): URR dens. (a)

```
FILE  2
   SECTION 151
      ENERGY =  1.38500E+04. STRENGTH FUNCTION IS  1.20000E-04
                ENERGY =  1.38500E+04. STRENGTH FUNCTION IS  1.20000E-04
                            DENSITY  8.98113E+01 SHOULD BE  8.22506E+01
```

3. Level density in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 1.40000E+04. STRENGTH FUNCTION IS 1.20000E-04 / DENSITY 8.97852E+01 SHOULD BE 8.22266E+01 (0): URR dens. (a)

```
FILE  2
   SECTION 151
         ENERGY =  1.40000E+04. STRENGTH FUNCTION IS  1.20000E-04
                      DENSITY  8.97852E+01 SHOULD BE  8.22266E+01
```

4. Level density in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 1.50000E+04. STRENGTH FUNCTION IS 1.20000E-04 / DENSITY 8.96105E+01 SHOULD BE 8.20667E+01 (0): URR dens. (a)

```
FILE  2
   SECTION 151
         ENERGY =  1.50000E+04. STRENGTH FUNCTION IS  1.20000E-04
                      DENSITY  8.96105E+01 SHOULD BE  8.20667E+01
```

5. Level density in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 1.60000E+04. STRENGTH FUNCTION IS 1.20000E-04 / DENSITY 8.94364E+01 SHOULD BE 8.19072E+01 (0): URR dens. (a)

```
FILE   2
   SECTION 151
           ENERGY =  1.60000E+04. STRENGTH FUNCTION IS  1.20000E-04
                           DENSITY  8.94364E+01 SHOULD BE  8.19072E+01
```

6. Level density in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 1.70000E+04. STRENGTH FUNCTION IS 1.20000E-04 / DENSITY 8.92624E+01 SHOULD BE 8.17478E+01 (0): URR dens. (a)

```
FILE   2
   SECTION 151
           ENERGY =  1.70000E+04. STRENGTH FUNCTION IS  1.20000E-04
                           DENSITY  8.92624E+01 SHOULD BE  8.17478E+01
```

7. Level density in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 1.80000E+04. STRENGTH FUNCTION IS 1.20000E-04 / DENSITY 8.90889E+01 SHOULD BE 8.15889E+01 (0): URR dens. (a)

```
FILE   2
   SECTION 151
           ENERGY =  1.80000E+04. STRENGTH FUNCTION IS  1.20000E-04
                           DENSITY  8.90889E+01 SHOULD BE  8.15889E+01
```

8. Level density in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 1.90000E+04. STRENGTH FUNCTION IS 1.20000E-04 / DENSITY 8.89157E+01 SHOULD BE 8.14303E+01 (0): URR dens. (a)

```
FILE   2
   SECTION 151
           ENERGY =  1.90000E+04. STRENGTH FUNCTION IS  1.20000E-04
                           DENSITY  8.89157E+01 SHOULD BE  8.14303E+01
```

9. Level density in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 2.00000E+04. STRENGTH FUNCTION IS 1.20000E-04 / DENSITY 8.87428E+01 SHOULD BE 8.12720E+01 (0): URR dens. (a)

```
FILE   2
   SECTION 151
           ENERGY =  2.00000E+04. STRENGTH FUNCTION IS  1.20000E-04
                           DENSITY  8.87428E+01 SHOULD BE  8.12720E+01
```

10. Level density in URR not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ENERGY = 3.00000E+04. STRENGTH FUNCTION IS 1.20000E-04 / DENSITY 8.70338E+01 SHOULD BE 7.97068E+01 (0): URR dens. (a)

```
FILE   2
   SECTION 151
           ENERGY =  3.00000E+04. STRENGTH FUNCTION IS  1.20000E-04
                           DENSITY  8.70338E+01 SHOULD BE  7.97068E+01
```

11. Level density in URR not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ENERGY = 4.00000E+04. STRENGTH FUNCTION IS 1.20000E-04 / DENSITY 8.53593E+01 SHOULD BE 7.81733E+01 (0): URR dens. (a)

```
FILE  2
   SECTION 151
          ENERGY =  4.00000E+04. STRENGTH FUNCTION IS  1.20000E-04
                          DENSITY  8.53593E+01 SHOULD BE  7.81733E+01
```

12. Level density in URR not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ENERGY = 5.00000E+04. STRENGTH FUNCTION IS
    1.20000E-04 / DENSITY 8.37185E+01 SHOULD BE 7.66706E+01 (0): URR dens. (a)

```
FILE  2
   SECTION 151
          ENERGY =  5.00000E+04. STRENGTH FUNCTION IS  1.20000E-04
                          DENSITY  8.37185E+01 SHOULD BE  7.66706E+01
```

13. Level density in URR not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ENERGY = 6.00000E+04. STRENGTH FUNCTION IS
    1.20000E-04 / DENSITY 8.21110E+01 SHOULD BE 7.51985E+01 (0): URR dens. (a)

```
FILE  2
   SECTION 151
          ENERGY =  6.00000E+04. STRENGTH FUNCTION IS  1.20000E-04
                          DENSITY  8.21110E+01 SHOULD BE  7.51985E+01
```

14. Level density in URR not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ENERGY = 7.00000E+04. STRENGTH FUNCTION IS
    1.20000E-04 / DENSITY 8.05357E+01 SHOULD BE 7.37558E+01 (0): URR dens. (a)

```
FILE  2
   SECTION 151
          ENERGY =  7.00000E+04. STRENGTH FUNCTION IS  1.20000E-04
                          DENSITY  8.05357E+01 SHOULD BE  7.37558E+01
```

15. Level density in URR not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ENERGY = 8.00000E+04. STRENGTH FUNCTION IS
    1.20000E-04 / DENSITY 7.89921E+01 SHOULD BE 7.23421E+01 (0): URR dens. (a)

```
FILE  2
   SECTION 151
          ENERGY =  8.00000E+04. STRENGTH FUNCTION IS  1.20000E-04
                          DENSITY  7.89921E+01 SHOULD BE  7.23421E+01
```

16. Level density in URR not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ENERGY = 9.00000E+04. STRENGTH FUNCTION IS
    1.20000E-04 / DENSITY 7.74796E+01 SHOULD BE 7.09570E+01 (0): URR dens. (a)

```
FILE  2
   SECTION 151
          ENERGY =  9.00000E+04. STRENGTH FUNCTION IS  1.20000E-04
                          DENSITY  7.74796E+01 SHOULD BE  7.09570E+01
```

17. Level density in URR not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ENERGY = 1.00000E+05. STRENGTH FUNCTION IS
    1.20000E-04 / DENSITY 7.59974E+01 SHOULD BE 6.95995E+01 (0): URR dens. (a)

```
FILE   2
    SECTION 151
            ENERGY =  1.00000E+05. STRENGTH FUNCTION IS  1.20000E-04
                       DENSITY  7.59974E+01 SHOULD BE  6.95995E+01
```

18. Level density in URR not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ENERGY = 1.10000E+05. STRENGTH FUNCTION IS 1.20000E-04 / DENSITY 7.45451E+01 SHOULD BE 6.82695E+01 (0): URR dens. (a)

```
FILE   2
    SECTION 151
            ENERGY =  1.10000E+05. STRENGTH FUNCTION IS  1.20000E-04
                       DENSITY  7.45451E+01 SHOULD BE  6.82695E+01
```

19. Level density in URR not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ENERGY = 1.20000E+05. STRENGTH FUNCTION IS 1.20000E-04 / DENSITY 7.31217E+01 SHOULD BE 6.69659E+01 (0): URR dens. (a)

```
FILE   2
    SECTION 151
            ENERGY =  1.20000E+05. STRENGTH FUNCTION IS  1.20000E-04
                       DENSITY  7.31217E+01 SHOULD BE  6.69659E+01
```

20. Level density in URR not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ENERGY = 1.30970E+05. STRENGTH FUNCTION IS 1.20000E-04 / DENSITY 7.17269E+01 SHOULD BE 6.56886E+01 (0): URR dens. (a)

```
FILE   2
    SECTION 151
            ENERGY =  1.30970E+05. STRENGTH FUNCTION IS  1.20000E-04
                       DENSITY  7.17269E+01 SHOULD BE  6.56886E+01
```

21. Strength function in URR not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ENERGY = 1.38500E+04. STRENGTH FUNCTION IS 3.00000E-04 / AVERAGE GAMMA WIDTH 7.50000E-03 / LIES OUTSIDE LIMITS 4.00000E-02 TO 9.00000E+00 EV. (0): URR str. ftn.

```
FILE   2
    SECTION 151
        ENERGY =  1.38500E+04. STRENGTH FUNCTION IS  3.00000E-04
                     AVERAGE GAMMA WIDTH 7.50000E-03
                               LIES OUTSIDE LIMITS 4.00000E-02 TO 9.00000E+00 EV.
```

22. Level density in URR not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ENERGY = 1.38500E+04. STRENGTH FUNCTION IS 3.00000E-04 / ENERGY = 1.38500E+04. STRENGTH FUNCTION IS 3.00000E-04 / DENSITY 6.93256E+01 SHOULD BE 5.98742E+01 (0): URR dens. (a)

```
FILE   2
    SECTION 151
        ENERGY =  1.38500E+04. STRENGTH FUNCTION IS  3.00000E-04
                ENERGY =  1.38500E+04. STRENGTH FUNCTION IS  3.00000E-04
                            DENSITY  6.93256E+01 SHOULD BE  5.98742E+01
```

23. Level density in URR not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ENERGY = 1.40000E+04. STRENGTH FUNCTION IS 3.00000E-04 / DENSITY 6.93054E+01 SHOULD BE 5.98568E+01 (0): URR dens. (a)

```
FILE  2
    SECTION 151
            ENERGY =  1.40000E+04. STRENGTH FUNCTION IS  3.00000E-04
                           DENSITY  6.93054E+01 SHOULD BE  5.98568E+01
```

24. Level density in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 1.50000E+04. STRENGTH FUNCTION IS 3.00000E-04 / DENSITY 6.91706E+01 SHOULD BE 5.97404E+01 (0): URR dens. (a)

```
FILE  2
    SECTION 151
            ENERGY =  1.50000E+04. STRENGTH FUNCTION IS  3.00000E-04
                           DENSITY  6.91706E+01 SHOULD BE  5.97404E+01
```

25. Level density in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 1.60000E+04. STRENGTH FUNCTION IS 3.00000E-04 / DENSITY 6.90362E+01 SHOULD BE 5.96242E+01 (0): URR dens. (a)

```
FILE  2
    SECTION 151
            ENERGY =  1.60000E+04. STRENGTH FUNCTION IS  3.00000E-04
                           DENSITY  6.90362E+01 SHOULD BE  5.96242E+01
```

26. Level density in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 1.70000E+04. STRENGTH FUNCTION IS 3.00000E-04 / DENSITY 6.89018E+01 SHOULD BE 5.95082E+01 (0): URR dens. (a)

```
FILE  2
    SECTION 151
            ENERGY =  1.70000E+04. STRENGTH FUNCTION IS  3.00000E-04
                           DENSITY  6.89018E+01 SHOULD BE  5.95082E+01
```

27. Level density in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 1.80000E+04. STRENGTH FUNCTION IS 3.00000E-04 / DENSITY 6.87679E+01 SHOULD BE 5.93926E+01 (0): URR dens. (a)

```
FILE  2
    SECTION 151
            ENERGY =  1.80000E+04. STRENGTH FUNCTION IS  3.00000E-04
                           DENSITY  6.87679E+01 SHOULD BE  5.93926E+01
```

28. Level density in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 1.90000E+04. STRENGTH FUNCTION IS 3.00000E-04 / DENSITY 6.86342E+01 SHOULD BE 5.92771E+01 (0): URR dens. (a)

```
FILE  2
    SECTION 151
            ENERGY =  1.90000E+04. STRENGTH FUNCTION IS  3.00000E-04
                           DENSITY  6.86342E+01 SHOULD BE  5.92771E+01
```

29. Level density in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 2.00000E+04. STRENGTH FUNCTION IS 3.00000E-04 / DENSITY 6.85008E+01 SHOULD BE 5.91619E+01 (0): URR dens. (a)

```
FILE  2
   SECTION 151
         ENERGY =  2.00000E+04. STRENGTH FUNCTION IS  3.00000E-04
                        DENSITY  6.85008E+01 SHOULD BE  5.91619E+01
```

30. Level density in URR not in agreement with PSYCHE's expectations
    *FILE 2 / SECTION 151 / ENERGY = 3.00000E+04. STRENGTH FUNCTION IS
    3.00000E-04 / DENSITY 6.71816E+01 SHOULD BE 5.80225E+01 (0): URR dens. (a)*

```
FILE  2
   SECTION 151
         ENERGY =  3.00000E+04. STRENGTH FUNCTION IS  3.00000E-04
                        DENSITY  6.71816E+01 SHOULD BE  5.80225E+01
```

31. Level density in URR not in agreement with PSYCHE's expectations
    *FILE 2 / SECTION 151 / ENERGY = 4.00000E+04. STRENGTH FUNCTION IS
    3.00000E-04 / DENSITY 6.58891E+01 SHOULD BE 5.69062E+01 (0): URR dens. (a)*

```
FILE  2
   SECTION 151
         ENERGY =  4.00000E+04. STRENGTH FUNCTION IS  3.00000E-04
                        DENSITY  6.58891E+01 SHOULD BE  5.69062E+01
```

32. Level density in URR not in agreement with PSYCHE's expectations
    *FILE 2 / SECTION 151 / ENERGY = 5.00000E+04. STRENGTH FUNCTION IS
    3.00000E-04 / DENSITY 6.46225E+01 SHOULD BE 5.58123E+01 (0): URR dens. (a)*

```
FILE  2
   SECTION 151
         ENERGY =  5.00000E+04. STRENGTH FUNCTION IS  3.00000E-04
                        DENSITY  6.46225E+01 SHOULD BE  5.58123E+01
```

33. Level density in URR not in agreement with PSYCHE's expectations
    *FILE 2 / SECTION 151 / ENERGY = 6.00000E+04. STRENGTH FUNCTION IS
    3.00000E-04 / DENSITY 6.33817E+01 SHOULD BE 5.47407E+01 (0): URR dens. (a)*

```
FILE  2
   SECTION 151
         ENERGY =  6.00000E+04. STRENGTH FUNCTION IS  3.00000E-04
                        DENSITY  6.33817E+01 SHOULD BE  5.47407E+01
```

34. Level density in URR not in agreement with PSYCHE's expectations
    *FILE 2 / SECTION 151 / ENERGY = 7.00000E+04. STRENGTH FUNCTION IS
    3.00000E-04 / DENSITY 6.21657E+01 SHOULD BE 5.36905E+01 (0): URR dens. (a)*

```
FILE  2
   SECTION 151
         ENERGY =  7.00000E+04. STRENGTH FUNCTION IS  3.00000E-04
                        DENSITY  6.21657E+01 SHOULD BE  5.36905E+01
```

35. Level density in URR not in agreement with PSYCHE's expectations
    *FILE 2 / SECTION 151 / ENERGY = 8.00000E+04. STRENGTH FUNCTION IS
    3.00000E-04 / DENSITY 6.09742E+01 SHOULD BE 5.26614E+01 (0): URR dens. (a)*

```
          FILE   2
             SECTION 151
                    ENERGY =   8.00000E+04. STRENGTH FUNCTION IS   3.00000E-04
                                   DENSITY  6.09742E+01 SHOULD BE   5.26614E+01
```

36. Level density in URR not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ENERGY = 9.00000E+04. STRENGTH FUNCTION IS
    3.00000E-04 / DENSITY 5.98067E+01 SHOULD BE 5.16531E+01 (0): URR dens. (a)

```
          FILE   2
             SECTION 151
                    ENERGY =   9.00000E+04. STRENGTH FUNCTION IS   3.00000E-04
                                   DENSITY  5.98067E+01 SHOULD BE   5.16531E+01
```

37. Level density in URR not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ENERGY = 1.00000E+05. STRENGTH FUNCTION IS
    3.00000E-04 / DENSITY 5.86626E+01 SHOULD BE 5.06649E+01 (0): URR dens. (a)

```
          FILE   2
             SECTION 151
                    ENERGY =   1.00000E+05. STRENGTH FUNCTION IS   3.00000E-04
                                   DENSITY  5.86626E+01 SHOULD BE   5.06649E+01
```

38. Level density in URR not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ENERGY = 1.10000E+05. STRENGTH FUNCTION IS
    3.00000E-04 / DENSITY 5.75415E+01 SHOULD BE 4.96967E+01 (0): URR dens. (a)

```
          FILE   2
             SECTION 151
                    ENERGY =   1.10000E+05. STRENGTH FUNCTION IS   3.00000E-04
                                   DENSITY  5.75415E+01 SHOULD BE   4.96967E+01
```

39. Level density in URR not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ENERGY = 1.20000E+05. STRENGTH FUNCTION IS
    3.00000E-04 / DENSITY 5.64428E+01 SHOULD BE 4.87478E+01 (0): URR dens. (a)

```
          FILE   2
             SECTION 151
                    ENERGY =   1.20000E+05. STRENGTH FUNCTION IS   3.00000E-04
                                   DENSITY  5.64428E+01 SHOULD BE   4.87478E+01
```

40. Level density in URR not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ENERGY = 1.30970E+05. STRENGTH FUNCTION IS
    3.00000E-04 / DENSITY 5.53662E+01 SHOULD BE 4.78179E+01 (0): URR dens. (a)

```
          FILE   2
             SECTION 151
                    ENERGY =   1.30970E+05. STRENGTH FUNCTION IS   3.00000E-04
                                   DENSITY  5.53662E+01 SHOULD BE   4.78179E+01
```

41. Strength function in URR not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ENERGY = 1.30970E+05. STRENGTH FUNCTION IS
    3.00000E-04 / AVERAGE GAMMA WIDTH 7.50000E-03 / LIES OUTSIDE LIMITS
    4.00000E-02 TO 9.00000E+00 EV. (0): URR str. ftn.

```
            FILE  2
               SECTION 151
                     ENERGY =  1.30970E+05. STRENGTH FUNCTION IS  3.00000E-04
                                 AVERAGE GAMMA WIDTH 7.50000E-03
                                          LIES OUTSIDE LIMITS 4.00000E-02 TO 9.00000E+00 EV.
```

42. Non-threshold reaction with Q value differing from PSYCHE's expectations
    FILE 3 / SECTION 107 / THE CALCULATED Q 3.96884E+06 DISSAGREES WITH
    THE GIVEN Q 0.00000E+00 (0): Iffy Q

```
            FILE  3
               SECTION 107
                     THE CALCULATED Q  3.96884E+06 DISSAGREES WITH THE GIVEN Q  0.00000E+00
```

- `groupie` Errors:

  1. Very small elastic cross section found
     0: Small elastic

     ```
     Multi-Group and Multi-Band Parameters from ENDF/B Data (GROUPIE 2015-2)
     ----------------------------------------------------------------------------
     ENDF/B Input and Output Data Filenames
     ENDFB.IN
     ENDFB.OUT
     ... [97 more lines]
     ```

- `fudge-4.0` Warnings:

  1. Missing a channel with a particular angular momenta combination
     resonances / resolved / MultiLevel_BreitWigner (Error # 0): missingResonanceChannel

     ```
     WARNING: Missing a channel with angular momenta combination L = 0, J = 1.5 and S = 1.5 for "capture"
     WARNING: Missing a channel with angular momenta combination L = 1, J = 0.5 and S = 1.5 for "capture"
     WARNING: Missing a channel with angular momenta combination L = 1, J = 1.5 and S = 1.5 for "capture"
     WARNING: Missing a channel with angular momenta combination L = 1, J = 2.5 and S = 1.5 for "capture"
     ```

- `fudge-4.0` Errors:

  1. Calculated and tabulated Q values disagree.
     reaction label 9: n[multiplicity:'2'] + Nd149 + gamma (Error # 0): Q mismatch

     ```
     WARNING: Calculated and tabulated Q-values disagree: -7516522.915313721 eV vs -7.38e6 eV!
     ```

  2. Calculated and tabulated Q values disagree.
     reaction label 10: n[multiplicity:'3'] + Nd148 + gamma (Error # 0): Q mismatch

     ```
     WARNING: Calculated and tabulated Q-values disagree: -12214349.73739624 eV vs -1.2418e7 eV!
     ```

  3. Calculated and tabulated Q values disagree.
     reaction label 11: n + H1 + Pr149 + gamma (Error # 0): Q mismatch

     ```
     WARNING: Calculated and tabulated Q-values disagree: -9552422.710662842 eV vs -9.995e6 eV!
     ```

4. If an outgoing energy distribution ends with more than one energy with probability=0, proper unitbase treatment is unclear. Distribution should end with exactly one P=0 point.
   reaction label 11: n + H1 + Pr149 + gamma / Product: n / Distribution: / energyAngular - XYs3d: (Error # 0): extraOutgoingEnergy

   ```
   WARNING: Extra zero-probability outgoing energies found at incident energy 1.2e7 eV
   WARNING: Extra zero-probability outgoing energies found at incident energy 1.3e7 eV
   WARNING: Extra zero-probability outgoing energies found at incident energy 1.4e7 eV
   WARNING: Extra zero-probability outgoing energies found at incident energy 1.45e7 eV
           ... plus 6 more instances of this message
   ```

5. Calculated and tabulated Q values disagree.
   reaction label 12: H1 + Pr150 (Error # 0): Q mismatch

   ```
   WARNING: Calculated and tabulated Q-values disagree: -4854595.888580322 eV vs -4.908e6 eV!
   ```

6. Calculated and tabulated Q values disagree.
   reaction label 13: H1 + Pr150_e1 (Error # 0): Q mismatch

   ```
   WARNING: Calculated and tabulated Q-values disagree: -4964595.888580322 eV vs -5.018e6 eV!
   ```

7. Calculated and tabulated Q values disagree.
   reaction label 14: H1 + (Pr150_c ->Pr150 + gamma) (Error # 0): Q mismatch

   ```
   WARNING: Calculated and tabulated Q-values disagree: -4964595.888580322 eV vs -5.018e6 eV!
   ```

8. Calculated and tabulated Q values disagree.
   reaction label 15: He4 + Ce147 (Error # 0): Q mismatch

   ```
   WARNING: Calculated and tabulated Q-values disagree: 4493325.712387085 eV vs 4.133e6 eV!
   ```

9. Calculated and tabulated Q values disagree.
   reaction label 16: He4 + Ce147_e1 (Error # 0): Q mismatch

   ```
   WARNING: Calculated and tabulated Q-values disagree: 4375685.712387085 eV vs 4015360. eV!
   ```

10. Calculated and tabulated Q values disagree.
    reaction label 17: He4 + Ce147_e2 (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: 4306815.712387085 eV vs 3946490. eV!
    ```

11. Calculated and tabulated Q values disagree.
    reaction label 18: He4 + Ce147_e3 (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: 4278115.712387085 eV vs 3917790. eV!
    ```

12. Calculated and tabulated Q values disagree.
    reaction label 19: He4 + Ce147_e4 (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: 4219415.712387085 eV vs 3859090. eV!
    ```

13. Calculated and tabulated Q values disagree.
    reaction label 20: He4 + Ce147_e5 (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: 4160405.712387085 eV vs 3800080. eV!
    ```

14. Calculated and tabulated Q values disagree.
    reaction label 21: He4 + Ce147_e6 (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: 4139895.712387085 eV vs 3779570. eV!
    ```

15. Calculated and tabulated Q values disagree.
    reaction label 22: He4 + Ce147_e7 (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: 4092335.712387085 eV vs 3732010. eV!
    ```

16. Calculated and tabulated Q values disagree.
    reaction label 23: He4 + Ce147_e8 (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: 4090945.712387085 eV vs 3730620. eV!
    ```

17. Calculated and tabulated Q values disagree.
    reaction label 24: He4 + Ce147_e9 (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: 4060295.712387085 eV vs 3699970. eV!
    ```

18. Calculated and tabulated Q values disagree.
    reaction label 25: He4 + Ce147_e10 (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: 4055205.712387085 eV vs 3694880. eV!
    ```

19. Calculated and tabulated Q values disagree.
    reaction label 26: He4 + Ce147_e11 (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: 3998015.712387085 eV vs 3637690. eV!
    ```

20. Calculated and tabulated Q values disagree.
    reaction label 27: He4 + Ce147_e12 (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: 3987695.712387085 eV vs 3627370. eV!
    ```

21. Calculated and tabulated Q values disagree.
    reaction label 28: He4 + Ce147_e13 (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: 3976345.712387085 eV vs 3616020. eV!
    ```

22. Calculated and tabulated Q values disagree.
    reaction label 29: He4 + Ce147_e14 (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: 3935085.712387085 eV vs 3574760. eV!
    ```

23. Calculated and tabulated Q values disagree.
    reaction label 30: He4 + Ce147_e15 (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: 3895505.712387085 eV vs 3535180. eV!
    ```

24. Calculated and tabulated Q values disagree.
    reaction label 31: He4 + Ce147_e16 (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: 3884705.712387085 eV vs 3524380. eV!
    ```

25. Calculated and tabulated Q values disagree.
    reaction label 32: He4 + Ce147_e17 (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: 3867525.712387085 eV vs 3.5072e6 eV!
    ```

26. Calculated and tabulated Q values disagree.
    reaction label 33: He4 + Ce147_e18 (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: 3819975.712387085 eV vs 3459650. eV!
    ```

27. Calculated and tabulated Q values disagree.
    reaction label 34: He4 + Ce147_e19 (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: 3816415.712387085 eV vs 3456090. eV!
    ```

28. Calculated and tabulated Q values disagree.
    reaction label 35: He4 + Ce147_e20 (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: 3783025.712387085 eV vs 3.4227e6 eV!
    ```

29. Calculated and tabulated Q values disagree.
    reaction label 36: He4 + (Ce147_c ->Ce147 + gamma) (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: 3783025.712387085 eV vs 3.4227e6 eV!
    ```

30. Calculated and tabulated Q values disagree.
    reaction label 38: n + He4 + Ce146 + gamma (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: -204501.1096954346 eV vs -3.79e5 eV!
    ```

31. If an outgoing energy distribution ends with more than one energy with probability=0, proper unitbase treatment is unclear. Distribution should end with exactly one P=0 point.
    reaction label 38: n + He4 + Ce146 + gamma / Product: n / Distribution: / energyAngular - XYs3d: (Error # 0): extraOutgoingEnergy

    ```
    WARNING: Extra zero-probability outgoing energies found at incident energy 7.e6 eV
    WARNING: Extra zero-probability outgoing energies found at incident energy 7.4e6 eV
    WARNING: Extra zero-probability outgoing energies found at incident energy 7.5e6 eV
    WARNING: Extra zero-probability outgoing energies found at incident energy 8.e6 eV
            ... plus 13 more instances of this message
    ```

32. Calculated and tabulated Q values disagree.
    reaction label 39: n[multiplicity:'2'] + He4 + Ce145 + gamma (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: -6781458.660614014 eV vs -7.088e6 eV!
    ```

33. If an outgoing energy distribution ends with more than one energy with probability=0, proper unitbase treatment is unclear. Distribution should end with exactly one P=0 point.
    reaction label 39: n[multiplicity:'2'] + He4 + Ce145 + gamma / Product: n / Distribution: / energyAngular - XYs3d: (Error # 0): extraOutgoingEnergy

```
WARNING: Extra zero-probability outgoing energies found at incident energy 1.4e7 eV
WARNING: Extra zero-probability outgoing energies found at incident energy 1.45e7 eV
WARNING: Extra zero-probability outgoing energies found at incident energy 1.5e7 eV
WARNING: Extra zero-probability outgoing energies found at incident energy 1.6e7 eV
         ... plus 4 more instances of this message
```

34. Calculated and tabulated Q values disagree.
    reaction label 40: n[multiplicity:'2'] + H1 + Pr148 + gamma (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -16129380.26156616 eV vs -1.6568e7 eV!
```

35. If an outgoing energy distribution ends with more than one energy with probability=0, proper unitbase treatment is unclear. Distribution should end with exactly one P=0 point.
    reaction label 40: n[multiplicity:'2'] + H1 + Pr148 + gamma / Product: n / Distribution: / energyAngular - XYs3d: (Error # 0): extraOutgoingEnergy

```
WARNING: Extra zero-probability outgoing energies found at incident energy 1.9e7 eV
WARNING: Extra zero-probability outgoing energies found at incident energy 2.e7 eV
```

36. Cross section domain does not match domain of linked reaction cross section sum
    crossSectionSum label 1: (z,n) (Error # 0): summedCrossSectionDomainMismatch

```
WARNING: Cross section domain does not match domain of linked reaction cross section sum
```

37. Cross section domain does not match domain of linked reaction cross section sum
    crossSectionSum label 2: (z,p) (Error # 0): summedCrossSectionDomainMismatch

```
WARNING: Cross section domain does not match domain of linked reaction cross section sum
```

- `njoy2012` Warnings:

  1. Recoil is not given, so one-particle recoil approximation used.
     heatr...prompt kerma (0): HEATR/hinit (4)

```
---message from hinit---mf6, mt102 does not give recoil za= 60151
                     photon momentum recoil used.
```